Warmup:

- Grab a slip of paper
- Put your name on it

- Distribute $4(2x+3)$

$8x+12$

$2x+3$

4	$8x$	$+12$

$8x+12$

11/07/13 Agenda

- Warm up

- Remediation packet for Chapter 2 is on the web site, you have until 11/15 to get it to me!

- Review 3.3 Worksheet (last nights homework)
  - Solving Inequalities by Multiplying/Dividing

- Section 3.4 day 1 - Solving Multi-Step Inequalities

- Homework - Worksheet 3-4
  - The side with the number lines - (1-8)
  - The side with the joke - (1-8)

Algebra 1-2 Name Answer Key ID: 1

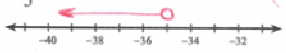
WS 3.3 Solving Inequalities Using * or / Date _____ Period ____

Solve each inequality and graph its solution.

1) $\frac{b}{5} < -7$

$5\left(\frac{b}{5}\right) < (-7)5$

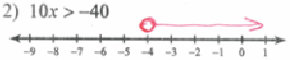
$b < -35$



2) $10x > -40$

$\frac{10x}{10} > \frac{-40}{10}$

$x > -4$



3) $\frac{a}{4} \geq 10$

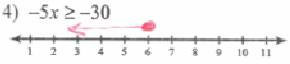
$4\left(\frac{a}{4}\right) \geq (10)4$

$a \geq 40$

4) $-5x \geq -30$

$\frac{-5x}{-5} \geq \frac{-30}{-5}$ FLIP IT!

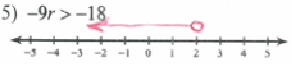
$x \leq 6$



5) $-9r > -18$

$\frac{-9r}{-9} > \frac{-18}{-9}$ FLIP IT!

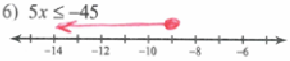
$r < 2$



6) $5x \leq -45$

$\frac{5x}{5} \leq \frac{-45}{5}$

$x \leq -9$



7) $\frac{n}{9} < -4$

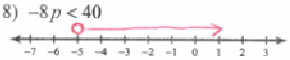
$9\left(\frac{n}{9}\right) < (-4)9$

$n < -36$

8) $-8p < 40$

$\frac{-8p}{-8} < \frac{40}{-8}$ FLIP IT!

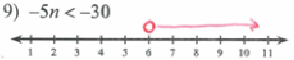
$p > -5$



9) $-5n < -30$

$\frac{-5n}{-5} < \frac{-30}{-5}$ FLIP IT!

$n > 6$



10) $\frac{v}{10} < 3$

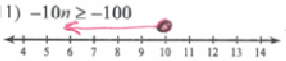
$10\left(\frac{v}{10}\right) < (3)10$

$v < 30$

11) $-10n \geq -100$

$\frac{-10n}{-10} \geq \frac{-100}{-10}$ FLIP IT!

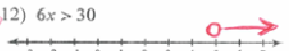
$n \leq 10$



12) $6x > 30$

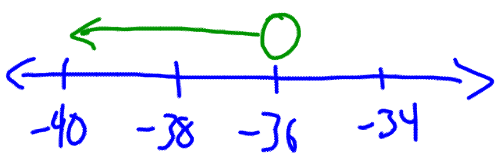
$\frac{6x}{6} > \frac{30}{6}$

$x > 5$



$9\left(\frac{n}{9}\right) < (-4)9$

$n < -36$



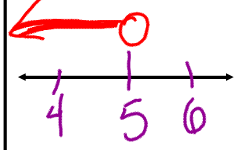
Section 3.4 - Solving Multi-Step Inequalities day 1
Target 3D

Goal: Solve multi-step inequalities.

Review from Yesterday: Solve and graph the following inequalities.

$\frac{2x}{2} < \frac{10}{2}$

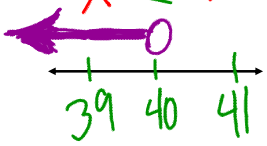
$x < 5$



$\frac{x}{-4} > -10$ (-4) (-4)

FLIP IT

$x < 40$



Solving Multi-Step Inequalities: When we solve, we want to use reverse order of operations, just like we would when solving equation.

PEMDAS

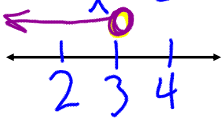
$3x + 7 < 16$

$-7 \quad -7$

$3x < 9$

$\frac{3x}{3} < \frac{9}{3}$

$x < 3$



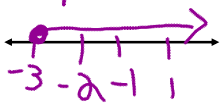
$6m - 3 \geq -21$

$+3 \quad +3$

$6m \geq -18$

$\frac{6m}{6} \geq \frac{-18}{6}$

$m \geq -3$



You Try:

PEMDAS

$6 \leq 12 + 4j$

$+6 \leq +12 + 4j$

$-12 \quad -12$

$-6 \leq 0 + 4j$

$+4 \quad +4$

$\frac{-6}{4} \leq \frac{4j}{4}$

$-1.5 \leq j$

$-6b - 7 < 17$

$+7 \quad +7$

$\frac{-6b}{-6} < \frac{24}{-6}$

FLIP IT

$b > -4$

$-4 > -3n$

Section 3.4 - Solving Multi-Step Inequalities day 1
Target 3D

Solving Inequalities with distribution and CLTs:

$3(x+4)<9$

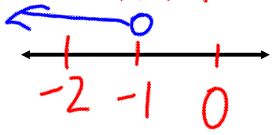
$3x+12<9$

$-12 \quad -12$

$3x<-3$

$\frac{3x}{3}<\frac{-3}{3}$

$x<-1$



$(b+1)-4b \leq -5$

$1b+1-4b \leq -5$

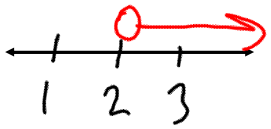
$-3b+1 \leq -5$

$-1 \quad -1$

$-3b \leq -6$

$\frac{-3b}{-3} \leq \frac{-6}{-3}$ FLIP IT

$b \geq 2$



You Try:

$2(x-3)>20$

$4(2x+3) \leq 36$

$15 \geq 5+2(4m+7)$

Summary:

When solving inequalities, be sure to distribute and combine like terms BEFORE you add/subtract and multiply/divide from each side!!! Go backwards in PEMDAS